

Appl. No. : 09/582,817
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AMENDMENTS TO THE CLAIMS

1.-29. (Cancelled)

30. (Currently amended) A method for a detection and/or quantification of a target molecule present in a sample, comprising the steps of:

allowing binding between said target molecule and a capture molecule fixed upon a side of the surface of a solid support, said solid support consisting of a compact disc (CD) or digital video disc (DVD) comprising registered data comprising pits and lands that can be read by a CD reading device,

wherein said binding occurs in areas separated from areas comprising registered data,

wherein said CD or DVD is not rotating on its axis and does not comprise microchannels,

~~wherein said microchannels are not grooves;~~

wherein capture molecules are located on a side areas of said disc in an area that do does not comprise tracks or grooves with registered data, and

wherein the target and capture molecules are nucleic acid molecules or ~~proteins~~;

removing unbound target molecules;

treating said CD or DVD in order to obtain a detectable signal resulting from the binding of the target molecule and said capture molecule,

wherein said binding results in a precipitate on said CD or DVD,

wherein said CD or DVD is not rotating on its axis;

detecting said signal, wherein said signal is not obtained through cleavage of the capture molecule, and

reading the registered data by penetration and reflection of a laser beam from the lands and pits by a first reading device and reading by a second reading device the signal resulting from the binding between said target molecule and said capture molecule, wherein said registered data is binary data which comprises characteristics and position of capture molecules fixed upon specific areas of said CD or DVD or interpretation of the signal resulting from the binding between the target and the capture molecules or data

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necessary to identify the CD, wherein the second reading device is an optical system for the detection of a light beam which moves along one dimension so as to cover the radius of the disc and wherein said readings being are done when the disc is rotating on its axis in an apparatus comprising the two different reading devices.

31. **(Cancelled)**

32. **(Withdrawn)** The method according to Claim 30, wherein the capture and target molecules are antigen-antibody pairs.

33. **(Withdrawn)** The method according to Claim 30, wherein the capture and target molecules are receptors and ligand pairs.

34. **(Previously presented)** The method according to Claim 30, further comprising detecting said signal by a method selected from the group consisting of reflection, absorption, and diffraction of a light beam, and variation of a magnetic field.

35.-39. **Cancelled**

40. **(Previously presented)** The method of Claim 30, wherein the precipitate is an opaque or magnetic precipitate.

41. **(Previously presented)** The method of Claim 30, wherein the binding between the target and capture molecules results in fixation of one or more molecule(s) used in the detection of the signal resulting from the binding between said target molecule and said capture molecule.

42.-44. **Cancelled**

45. **(Original)** The method of Claim 30, wherein the binary data are grooved binary data.

46.-48 **Cancelled**

49. **(Withdrawn)** A disc comprising registered data, and non-cleavable capture molecules that bind with target molecules, wherein said registered data and said capture molecules are located in different areas on the surface of the disc.

50. **Cancelled**

51. **(Withdrawn)** The disc according to Claim 49, wherein the registered data are binary data.

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52. **(Withdrawn)** The disc of Claim 51, wherein the binary data are grooved binary data.

53. **(Withdrawn)** The disc according to Claim 51, wherein the disc is a compact-disc.

54. **(Withdrawn)** The disc of Claim 49, further comprising microchannels connected and in fluidic contact.

55. **(Withdrawn)** A method of preparing a disc comprising registered data and non-cleavable capture molecules, comprising the step of fixing upon a side of the surface of the disc comprising registered data, non-cleavable capture molecules at specific dedicated areas different from the areas comprising registered data, through a photoactivation of said capture molecules.

56. **(Withdrawn)** The process of Claim 55, wherein the fixation of non-cleavable capture molecules is obtained through a covalent link between an extremity of the capture molecules and the surface layer of the disc.

57. **(Withdrawn)** The process of Claim 55, wherein the disc surface comprises a protective layer, which allows or improves the protection and stabilization of the non-cleavable capture molecule and/or the protection, stabilization and/or detection of the binding between the target molecule and its non-cleavable capture molecule.

58. **(Withdrawn)** The diagnostic kit comprising the disc of Claim 49 and reactants that allow the binding between the target molecule and its capture molecule.

59. **(Withdrawn)** The kit of Claim 58, further comprising reactants that allow the detection of a signal which results from said binding.

60. **(Withdrawn)** A detection device which detects a signal which results from the binding between a target molecule present in a sample and its capture molecule located on a disc having registered data.

61. **(Withdrawn)** The detection device of Claim 60, comprising a compact-disc reading device.

62. **(Withdrawn)** The detection device according to Claim 61, comprising a first reading head for the reading of the registered data upon the disc and a second reading head for the detection of the signal resulting from the binding between target molecule and its capture molecule.

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63. **(Withdrawn)** The detection device of Claim 60, further comprising additional means for the purification of the target molecule, the specific cleavage of the target molecule, and the possible genetic amplification of said target molecule.

64. **(Previously presented)** The method of Claim 30, wherein the precipitate is a silver precipitate.